

## DISPLAY AID

### FIELD OF THE INVENTION

This invention relates to cart accessories, in particular to versatile list  
5 holders or displays that are attachable to a cart or the like, useful in supermarkets  
or stores for shopping, in airports for carrying luggage, hospitals for carrying  
equipment, and other applications.

### BACKGROUND OF THE INVENTION

Self-service shopping with the aid of a cart has gained virtually universal  
10 acceptance. Almost invariably, a shopping list is used to optimise the shopping  
activity at any one store or supermarket, and if properly organized the list ensures  
that on the one hand no time is wasted unnecessarily by grouping items  
according to where they are to be found in the store, and on the other hand that  
no shopping items are forgotten. Virtually constant manipulation of the list is  
15 required to tick off items as they are placed into the cart, and to write new items  
as they are recalled by the shopper as missing on the list. As such, the list must  
be periodically removed from and replaced into a pocket or purse, which is a  
frustrating activity and which can cause damage to the list. Alternatively, the  
shopper may try to hold the list while at the same time navigating the cart so that  
20 the list is always at hand. This is also frustrating to the shopper, particularly as  
sometimes both hands are needed to place items into the cart and/or for pushing  
the same. Placing the list in the cart itself between manipulations can also be a

problem since it requires the shopper to look for the list among the shopping each time the list is needed, which is not desirable, and the list can also soon get mixed up with the shopping and difficult to retrieve. In any case, to write on the list, or even to tick off items can also be a problem, since it can often be difficult  
5 to find a suitable surface on which to rest the list in order to write on it.

Shopping list holders are known for attaching a list to a shopping cart to alleviate the above frustrations and difficulties. In US 5,154,330 a method is described for fastening a list holder on a vertical rod of a child seat on a standard shopping cart. A fastener in the form of a hook connected to the list holder via a  
10 swiveling joint, such as to permit the holder to be positioned at two distinct angles of repose.

EP 855331 and EP 384,855 describe list holders that are attached to a cart via the automatic deposit lock installed on the handles of some shopping carts, and are thus unusable on regular carts that do not have such a lock.

15 US 6,250,006, US 3,964,134 and US 3,539,204 describe clipboards that are mounted to a shopping cart, in which clamps or clips mount the boards to the cart in a horizontal position.

US 4,512,504 describes an organizer having a notepad, in which a flap wraps around and secures the holder to the handle of a cart.

20 In US 3,881,267, a list holder is disclosed for mounting onto a handle of a cart at any desired position by means of C-clamps which are screwed together over the handle.

In WO 94/20309 a support consists of a plate made from two flat members hinged along a fold portion, wherein shopping lists may be attached to  
25 the inner surface of the plate. A flexible tab loops around a shopping cart handle and reversibly attaches to the outer surface of one of the flat members, enabling the support to dangle freely from the handle. The flat members may be folded one over the other via the fold portion and kept in place via a stud.

## SUMMARY OF THE INVENTION

In accordance with the present invention, a display aid is provided which is both simple to install and use, and which is relatively inexpensive to produce. No special attachments on the cart or the like are required. In some embodiments,  
5 the aid is of integral construction, and manufactured from a blank of resilient material, e.g. a rigid though pliable material such as plastic, cardboard, etc. However, the display aid may also be formed of several portions integrated together.

Herein the term "*cart*" includes any form of cart, including shopping carts,  
10 trolleys used in airports to carry luggage, baby prams and pushchairs, bicycles and indeed any other vehicle that may be used for carrying items of interest for a user and which comprises a handle for holding or pushing by the user. Alternatively, the term shopping cart also includes other structures, static or dynamic, on which it may be desirable to display a list, chart or the like such as  
15 for example a patient's bed in a hospital, which bed may be static or transportable, and which comprises a suitable bar or handle on which the list may be mounted.

Herein, the term "*shopping list*" refers to any list that contains a plurality of items that may be of interest to a person particularly when the person requires  
20 to purchase or otherwise procure such items from a supplier. The list may therefore include regular shopping lists, where a customer lists the items that he or she wishes to purchase from a store, but also includes other lists such as for example lists of books that one may wish to borrow from a lending library, or lists of stationary that one needs to procure from a central depot for an office, and  
25 so on. Alternatively, the list may also include task lists for an airline passenger in an airport, for example, check in time, departure time and so on. Alternatively, the list may include medical check lists and/or charts for patients which may be mounted onto trolleys carrying medical equipment, to a patient's bed, or the like.

According to the present invention there is provided a display aid comprising a user interface portion and a handle mounting portion, wherein said handle mounting portion is removably attachable to a handle of a cart by at least  
5 partially embracing a portion of the handle.

According to one embodiment of the invention there is provided a display aid comprising a user interface portion and a handle mounting portion, wherein said handle mounting portion comprises at least a pair of hooks for removable bracing at least a portion of a handle of a cart such that when it is mounted over  
10 the handle said user interface portion loosely dangles.

The display aid, according to several embodiments, comprises a user interface portion and a handle mounting portion, wherein said handle mounting portion is deformable between a first position in which it is substantially flat and a second position where it is deformed so as to attach over a handle of a cart.

15 By one particular embodiment the handle mounting portion comprises a double-lobed base portion and a hook portion circumscribing the base portion. optionally, the hook portions are joined to one another via an integral hinge or a film hinge extending about a central fold line of the handle mounting portion, and said hook portions are hinges at their other ends to a portion adjoining the  
20 user interface portion, at inclined fold lines by integral hinges or a film hinges. According to one particular design, the inclined fold lines extend at an angle if between about 30° and 60° with respect to the central fold line.

The arrangement is such that when the handle mounting portion is attached to a handle, the hooks partially embrace the handle and wherein upon  
25 depressing the hook portions towards one another they assume a butterfly like configuration giving rise to a handle bracing zone formed at the absent portion of the base portion.

The user interface portion comprises at a front surface thereof a data pad which may be a writing pad (e.g. a stack of detachable paper sheets), an erasable

writing surface, at least a partial preset list of items with a tic box associated with each item, and it is likely that the user interface portion comprises a writing utensil holding portion.

- The display aid may have added value as a commercial advertising article, wherein at least a portion of the display aid may bear a commercial motive for advertisement purposes, or at least a front surface of the display aid comprises commercial display portion, or the display aid comprises at least a portion shaped in the form of a commercial element, e.g. the shape of a well known beverage bottle, etc.
- 10 At least the handle mounting portion is made of a sheet of rigid though pliable material and typically the user interface portion is integrated therewith, whereby the article is formed out of a uniform sheet of material, e.g. plastic material, cardboard, etc.

#### BRIEF DESCRIPTION OF THE DRAWINGS

- 15 In order to understand the invention and to see how it may be carried out in practice, several embodiments will now be described, by way of non-limiting examples only, with reference to the accompanying drawings, in which:

Fig. 1a is a front view of a display aid according to a first embodiment of the present invention;

- 20 Fig. 1b is a side view of the display aid of Fig. 1a;

Fig. 2 illustrates how the display aid of Fig. 1a is attached to a handle/push-bar of a cart;

Fig. 3 is a rear view of a top portion of the display aid attached to the handle;

- 25 Fig. 4a is a front view of the display aid attached to the handle;

Fig. 4b is a side view of the display aid attached to the handle;

Figs. 5a and 5b are a front view and a side view, respectively, of a display aid according to a different embodiment of the present invention;

Fig. 5c is a sectioned elevation taken along line X-X in Fig. 5b;

01515261/5-01

Fig. 6a is an isometric view of a display aid according to a modification of the invention, while being attached to a handle of a cart;

Fig. 6b is a rear view of a top portion of the display aid of Fig. 6a, while attached to a handle of a cart;

5 Fig. 7a is a planar view of a display aid according to a different embodiment of the present invention;

Fig. 7b illustrates the display aid of Fig. 7a, while mounted on a handle of cart;

10 Fig. 7c is a rear view of a top portion of the display aid of Fig. 7a, while attached to a handle of a cart;

Fig. 8a is a planar view of a display aid according to another embodiment of the present invention;

Fig. 8b illustrates the display aid of Fig. 8a, while mounted on a handle of cart; and

15 Figs. 9a and 9b are a planar view and a side view, respectively, of still another embodiment of the invention, where the display aid is fitted with a writing utensil support.

## DETAILED DESCRIPTION OF THE INVENTION

According to a first embodiment of the present invention, and referring to  
20 Figs. 1a and 1b, a display aid, generally designated with the numeral 100, is typically formed from a one-piece blank. The aid 100 comprises a user interface portion 10 and a handle mounting portion 20.

The user interface portion 10 comprises a substantially flat plate, having a front surface 12 on which a shopping list or the like may be written or attached,  
25 and a rear surface 14. In the present embodiment, the portion 10 comprises a display pad 16 mounted on front surface 12, and is overlaid a layer of dry erase material, on which items of a shopping list or the like may be written, to be erased at a later date and overwritten with a new list. Optionally, the layer of dry erase material may be permanently imprinted one or a plurality sets of indicia 15.

Each set may refer to a word or phrase indicative of a common item that may often appear on the list. A blank box 11 is provided in proximity to each item, and the box may be marked off by the user with a dry erase marker whenever the item is needed. This helps the shopping list to be created before shopping begins.

5 Blank spaces may be left near the sets, optionally next to a list of boxes 11, which serve to allow the user to write and erase items not found in the pre-printed list. A second column of boxes 13 may be added to enable the user to tick off items as they are placed in the shopping cart, enabling the user to concentrate on the remaining items in a clearer manner.

10 The handle mounting portion 20 is made of a rigid though pliable sheet of material, e.g. plastic or cardboard, and comprises at its free end a cut line 22 dividing this end into a double-lobed base portion 26, and a hook portion 24. The hook portion 24 circumscribes the base portion 26 and is formed from two G-shaped strips 28 joined to each other via film hinge or fold line 29 aligned with a  
15 longitudinal axis 200 of the aid 100, and to the remainder of the portion 20 via fold lines 27, which are set at an angle  $\alpha$  to axis 200. Angle  $\alpha$  is typically between about  $30^\circ$  and about  $60^\circ$ , and preferably about  $45^\circ$ . A further two fold lines 25 are provided, one in each strip 28, arranged substantially orthogonally to axis 200, and adapted to fold in a direction opposite to that of fold lines 27 or 29.

20 Referring to Fig 2, 3, 4a, 4b in particular, as the strips 28 are brought towards one another by folding about fold lines 27 and 29, the hook portion 24 assumes a hook-like configuration above and opposite the base portion 26, defining a zone or area 30 there between. The fold lines 25 assist the strips 28 to approach each other with minimal bending thereof. The dimensions of the hook  
25 portion 24 and base portion 26 are such that the area 30 is able to accommodate therein the cross-section of a standard shopping cart handle 50 or the like. The handle 50 is shown here as having a substantially circular cross-section for illustrative purposes. The handle 50 may have any suitable cross-sectional profile. The curvature of hook surfaces 44 and the area 30 may be large enough  
30 such that the aid 100 hangs freely from the handle 50, and the base 26 acts as a

guard to prevent the aid 100 from simply falling off the handle 50. Alternatively, a smaller curvature for surfaces 44 and smaller area 30 may be provided, such that the handle 50 is abutted by both the surfaces 44 and base portion 26 with some pressure, provided by the resilience of the material from which the aid 100 is formed.

Referring to Figs. 1a and 1b, the base portion 26 may optionally comprise a friction inducing pad 38, such as for example rubber or the like, mounted on the upper surface thereof and designed to abut the handle 50 to increase the grip of the aid 100 with respect to the handle 50. Furthermore, the friction provided between the handle 50 and pad 38 enables the holder to be positioned at almost any desired angle of repose  $\beta$  to the horizontal.

Further optionally, the aid 100 comprises a magnetic pad 32 on the rear surface 14 for securing the aid to a refrigerator or similar device. Obviously, the magnetic pad may extend over the entire area of the rear surface 14 or at selected portions thereof. According to a particular embodiment, the entire display pad, or portions thereof may be made of a magnetic material. An aperture 35 may also be provided to hang the aid 100 from a suitable nail or hook that may protrude from a wall, door or the like. In each case, the aid is secured magnetically or via the aperture to a convenient location. According to a different arrangement, the rear surface 14 is provided with one member of a *hook and pile* fastener (Velcro<sup>TM</sup>), whilst another member is attached to another surface, e.g. a refrigerator or the like, whereby the display list may be removably attached thereto. As various items require replenishment, they can be marked on the list if they correspond to items preprinted thereon, or may be written in the blank spaces provided.

In operation, as each item is selected and placed in the shopping cart, the mark or box 11 adjacent the description item may be erased. Alternatively, the second box 13 next to each item on the list may be marked as well. The second procedure enable the user to retain the original list, and compare the items procured vs. the items remaining. This has the advantage of enabling the user to



determine whether a particular item (which may now be inaccessible in the cart) was actually included in the list and has been purchased, which is not possible when following the first procedure described above.

Referring to Figs. 5a, 5b and 5c, a second embodiment of the present invention comprises an aid 100' substantially similar to the first embodiment as described herein with the following differences, *mutatis mutandis*. In the second embodiment, the display pad 16 is replaced with a single sheet of paper or a pad 25 comprising a plurality of sheets attached to the interface portion 10, and these sheet(s) may be blank for the user to compose the list as desired, or may be preprinted in a similar manner to that described for the dry erasable layer, *mutatis mutandis*. The pad 25 may be attached to the interface portion 10 with an adhesive or the like. Typically, the pad 25 is held in the interface portion 10 by means of a contoured clip 42, likely to be integrally formed with the interface portion 10, and made from a resilient material that clamps the pad 25 to the portion 10.

For this embodiment, or indeed for the first embodiment, optionally, and as illustrated in Figs 6a and 6b, the hook portion 24 is replaced with hook portion 24' that does not comprise one or more of said fold lines 29, 25, 27. Instead the resilience of the material from which the aid 100 is formed enables the portion 24' to deform and bend such as to assume a hook-like configuration above and opposite the base portion 26, in a similar manner to that described above for the earlier embodiment, *mutatis mutandis*.

Referring to Figs. 7a, 7b and 7c, a further embodiment of the present invention comprises an aid 100" substantially is similar to the first embodiment or to the second embodiment as described herein with the following differences, *mutatis mutandis*. According to this embodiment, there is provided a different hook portion 302 comprising a central portion 304 and two hook portions 306A and 306b, and a base portion comprised of two such base portions 308A and 308B. The arrangement is such that a planar position of the display aid (Fig. 7a) the hook portions 306A and 306B practically compliment the base portions 308A

and 308B, respectively and where at the position mounted over a handle/push-bar 310 of a cart (not shown), the handle is clampingly received between the central portion 304 on one side and a pair of complimenting hook portion and base portion (306A; 308A and 306B, 308B), respectively.

5 A modification of the third embodiment is illustrated in Figs. 8a and 8b where a display aid generally designated 300 comprises a user interface portion in the form of a writing pad 302 fixed to a handle mounting portion 306 made of a rigid though pliable material and formed with a pair of hooks 310A and 310B. at the initial position the handle mounting portion 306 is essentially flat, as in  
10 Fig. 8b. However, upon bracing a handle 316 of a cart, e.g. shopping cart (not shown), the handle mounting portion 306 slightly bows about a central portion 318 thereof. Other features of the device are similar to any of the above referred to embodiments.

In the embodiment of Figs. 9a and 9b there is illustrated a display aid  
15 generally designated 360 comprising a handle mounting portion 364 similar to corresponding portion 20 in the embodiment of Figs. 1a and 1b, and a user interface portion 368 formed of a support portion 370 holding a pad 374 of detachable paper sheets and comprising at a bottom end thereof a writing utensil holder 376 in the form of two laterally folded flaps 378A and 378B supporting  
20 therebetween a pencil 380. according to other embodiments, not shown, the writing utensil holder may be in the form of a cord extending from the display pad and attached to the writing utensil, or a clip or a hook and pile fastener (Velcro<sup>TM</sup>), etc.

While the shopping aid of the present invention is typically of integral  
25 construction and made from a blank or molded from a suitable material it may be made, alternatively, from a plurality of suitably shaped parts mounted together in the appropriate manner.